

## Seed Testing in South Dakota

A public seed testing laboratory is maintained by SDSU to test seed samples for farmers, seedsmen, South Dakota Crop Improvement Association, and the South Dakota State Department of Agriculture. The lab is equipped with modern testing equipment necessary to perform tests on all kinds of agricultural crops, grasses, flowers, vegetables, and trees. It is staffed with experienced, technically trained and accredited analysts (CSA and RST\*) and part-time assistants who work under constant supervision. All analyses performed by the lab are made according to the Rules for Testing Seeds published by the Association of Official Seed Analysts (AOSA). The report issued by the lab is an official test of the sample submitted.

### Obtaining a Sample

To take a representative sample, obtain five to seven subsamples from several areas of the bin using a seed probe. Mix the probed samples and divide them down to the amount needed for testing. DO NOT sample just the top one foot of your bin. If the seed is in bags, sample five bags plus 10% of the total number of bags in the seed lot (i.e. 50 bags; sample 10 bags) and divide sample down to desired weight.

### Size of Sample for Testing

Cereals	1 quart
Small seeded legumes and flowers	1/2 quart
Soybeans	1 quart
Non-chaffy grasses	1 quart
Chaffy Grasses	1 quart
Sunflowers	1 quart

- Samples for Seed Certification should be double this size.
- Treated seed must be clearly labeled and treatment must be indicated.

\*CSA Certified Seed Analyst (AOSA)

\*RST Registered Seed Technologist (SCST)

Appropriate Sales Tax will be added.

Prices are subject to change without prior notice.

#### Category 1

Buckwheat  
Cereals  
Flax  
Proso Millet  
Safflower  
Sorghum  
Sudangrass  
Sunflower

#### Category 2

Corn  
Field Beans  
Field Peas  
Soybeans

#### Category 3

Alfalfa/Clovers  
Birdsfoot Trefoil  
Crownvetch  
Foxtail Millet  
Lead Plant  
Lespedeza  
Pearl Millet  
Rape/Canola  
Sainfoin  
Sweetclover  
Vetch

#### Category 4

Bluegrass  
Bromegrass  
Fescue  
Orchardgrass  
Redtop/Bentgrass  
Reed Canarygrass  
Ryegrass  
Timothy  
Wheatgrass Spp.  
(except Western)  
Wildrye Spp.

#### Category 5

Alkali Sacaton  
Buffalograss  
Indian Ricegrass  
Prairie Dropseed  
Sand Dropseed  
Sand Lovegrass  
Switchgrass  
Western Whtgr.

#### Category 6

Bluestems  
Creeping Foxtail  
Gramas  
Indiangrass  
Prairie Cordgrass  
Prairie Sandreed

#### Category 7

Bulrush/Sedges  
Flowers/Wildflowers  
Herbs  
Shrubs  
Trees  
Vegetables

#### Category 8

Mixtures, samples  
with excessive  
weed seed, or  
**any** purity samples  
that take 1 hour  
or more to complete.

#### Category 9

Green Needlegrass

### Cost by Category<sup>1</sup>

Category	Purity <sup>2</sup>	Germ <sup>6</sup>
1	\$21.00	\$24.00 <sup>5</sup>
2	24.00 (includes noxious)	25.00
3	25.00	26.00
4	30.00	34.00
5	30.00	38.00
6	50.00/hour	38.00
7	50.00/hour	38.00
8	50.00/hour	3
9	27.00	64.00 <sup>4</sup>

<sup>1</sup> Purity and noxious testing by ISTA rules are double the shown rate.

<sup>2</sup> Purities requiring ≥ 1 hour to complete are charged at \$50.00/hour.

<sup>3</sup> Sum of individual cost of each component.

<sup>4</sup> Includes germination and tetrazolium test.

<sup>5</sup> Cost for planting 8 reps of 50 seed – \$28.00.

<sup>6</sup> Sand/soil germinations – add \$10.00.

### Other Testing Charges

South Dakota Noxious	\$17.00
USA Noxious (Continental USA—excludes AK & HI)	27.00
UGS Check (Undesirable Grass Seed)	30.00
USA Noxious and UGS	35.00
Western States Noxious (AZ, CA, CO, ID, KS, MT, ND, NE, NM, NV, OR, SD, UT, WA, WY)	27.00

### Tetrazolium (TZ) Testing:

Cereals	\$39.00
Grasses	46.00
Legumes	46.00
Others (Buckwheat, Sunflower, Safflower, Flax)	44.00
Accelerated Aging	27.00
Alfalfa Dodder Check (400g exam)	55.00
Barley Smut Test	60.00
Chlorox Soak	20.00
Corn Cold Test	27.00
Fluorescence on Oats	6.00 with purity, 15.00 alone
Moisture Test	
Meter	8.00
Air-oven	22.00
Potassium Hydroxide	50.00
Protein Test	15.00
Quick/Rush Test	50.00
Rough Purity (on chaffy grass, unofficial)	32.00
Roundup Ready Test (bioassay method)	30.00
Seed Count per lb. (Free with other test)	6.00
Seed Identification (Free to active clients)	6.00/sample
Test Weight	8.00
Variety ID (HPLC)	check online for price/brochure
Other Tests Available Upon Request.	

## Routine Testing Services

**Purity Analysis\* (P):** Determines percentage of pure seed, inert matter, other crop, and weed seed present in the sample submitted for analysis. Identification is made of the other crop and weed seed found and reported out at the rate of occurrence.

**Noxious Exam\* (N):** Determines rate of occurrence for any prohibited or restricted noxious weed seeds present in the sample. Only the presence of weed seeds noxious to South Dakota are determined in the South Dakota Noxious Test while the presence of any weed seed considered noxious somewhere within the continental United States is determined in the USA (Continental) Noxious Test. Request USA if seed is to be sold out of South Dakota.

*Does not include UGS check!*

**Germination Test\* (G), also known as standard or warm germ:** Determines percentage of normal seedlings that develop under ideal growing conditions. The percentage of hard seed or dormant seed is also determined when present, and reported as a portion of the total viable percentage.

**Tetrazolium Test (TZ):** A rapid (24-48 hr.) chemical viability test which can be used to estimate the results of the germination test; however, **it cannot be used as a legal substitute for the germination test.** Results of the TZ test will be emailed to the customer when completed.

**Accelerated Aging Test (AA):** A high humidity, high temperature stress test that is a good indicator of vigor in soybean seed and other crops. This test should be conducted in conjunction with a standard germination test.

**Cold Test:** An excess moisture, field soil, and low temperature stress test that has proven to be useful in determining the vigor level of corn and other crops. This test should be conducted in conjunction with a standard germination test.

**UGS Check:** A check for undesirable grass seed (on a noxious sample size) in lawn and turf seed/mixtures as indicated in the Delaware, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia State Seed Laws.

**Rough Purity:** An unofficial test to determine purity of uncleaned seed lots. Used primarily for chaffy grasses (i.e. bluestems, etc.) Only 1/4 of the official purity sample size is tested.

**HPLC Variety ID/Verification:** A test to identify/verify wheat, oats, barley, rye, and triticale varieties. Call or check our website under the "Quick Links" section for cost and information. ([sdstate.edu/sites/default/files/file-archive/2023-07/HPLC\\_Information\\_%26\\_Fees.pdf](http://sdstate.edu/sites/default/files/file-archive/2023-07/HPLC_Information_%26_Fees.pdf))

**Seed Count/Pound:** The number of seeds per pound will be determined on the sample submitted for analysis by an electronic seed counter. Performed upon request only.

**Quick/Rush Test:** Samples submitted for analysis are normally tested in the order in which they are received. The request for a rush will give that sample first priority ahead of other samples.

**Uncleaned Samples:** The seed lab reserves the right to refuse to test screenings or very dirty, unclean samples. If samples of this type are accepted for testing, charges will be assessed at the rate of \$50.00 per hour labor.

**Smut Test:** Available on barley samples upon request. Research has indicated that a direct relationship exists between the percent of seeds infected with smut and percent of yield loss when infection rates exceed 5%.

**\* Required for sale in South Dakota, SDCL 38-12A.**

# SEED TESTING LABORATORY



## Seed Testing Services Analyst Training Seed Research

*Member*

Association of Official Seed Analysts  
Society of Commercial Seed Technologists

*Shipping Address using  
U.S. Postal Service*

SDSU Seed Testing Lab  
AHPs Department  
Box 2100A  
Brookings, SD 57007

*Shipping Address using  
UPS/FedEx/Speed-Dee*

SDSU Seed Testing Lab  
SDSU Innovation Campus  
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[sdstate.edu/agronomy-horticulture-and-plant-science/sdsu-seed-testing-lab](http://sdstate.edu/agronomy-horticulture-and-plant-science/sdsu-seed-testing-lab)

**JULY 1, 2023**

The South Dakota Seed Law requires that a complete test (Purity, Noxious Weed Exam, and Germination) must be obtained before any seed can be sold, offered for sale, or transported for sale.